PBS

Burial Pile and Buried Steam Line Work Plan

North Ridge Estates
Klamath Falls, Oregon

prepared by:
PBS Engineering and Environmental

July 2003
Project #19148.002 Task 1
Project #19148.005 Task 1

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North Ridge Estates
Klamath Falls, Oregon

AOC Tasks 4A and 8A

July 2003

Prepared and Submitted By:

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June 20, 2003

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Date

Reviewed and Approved By:

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U.S. EPA Region 10
On Scene Coordinator

July 2, 2003 (verbal)

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Date

1. SCOPE

This Work Plan is Task 4A in the Time-Critical Removal Action Statement of Work, part of the Administrative Order on Consent (AOC) for Removal Action and Stream-lined Risk Assessment at the site. This Work Plan addresses the need for stabilizing, consolidating or otherwise addressing the five burial locations that have historically been identified by the DEQ and others at the site, and for evaluating any additional burial locations that have been identified in the project area.

Such "burial piles" are currently suspected to be the locations of large amounts of ACM debris. This Work Plan involves an examination of the pile contents at the five locations that have historically been mapped at the site, and determination of the most appropriate means of interim and long-term control to manage potential heath hazards related to ACM debris in the piles.

This Work Plan also describes work to be conducted under Task 8A of the AOC, to conduct a Geophysical Survey to assess the extent of buried steam lines. To a certain extent, geophysical methods will also be used to attempt to define the limits of certain burial piles.

Procedures related to personnel air monitoring, sampling and analysis and health and safety are addressed in a separate document, the Hazardous and Contaminated Substance Health and Safety Plan. Sampling and analysis will be addressed in Task 6A of the AOC.

2. DEFINITIONS

Abatement: Procedures to control fiber release from asbestos-containing building materials. Includes encapsulation, enclosure and removal, repair and related activities.

Asbestos: Asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, actinolite and/or tremolite.

Asbestos-Containing Material (ACM): Materials identified and defined at 40 CFR 61.141, to include Category I and II nonfriable ACM; and at OAR 340-248-0010.

Asbestos-Containing Waste Material: Any material which is or is suspected of being ACM or any material contaminated with ACM which is to be removed from a work area for disposal.

Contractor: Asbestos abatement contractor, currently and for the duration of the project licensed in the State of Oregon to perform asbestos abatement, per OAR Chapter 340 Div. 248.

Debris: For purposes of this scope of work, pieces of cement-asbestos board or transite, roofing material, vinyl floor tile and mastic, or pipe insulation; of a size approximately 1-inch or greater in largest dimension; visible and accessible to hand-pickup at the ground surface.

Disposal: Transport and deposit of asbestos-contaminated materials in an approved waste disposal site in compliance with applicable EPA, OSHA, DOT, and other applicable regulations including OAR 340-248-0280 and OAR 340 Division 94.

Global Positioning System (GPS): A worldwide system that allows the measurement of a geographic location with a high degree of accuracy, utilizing hand-held or backpack field equipment; equipment to be use will have an accuracy of approximately 1 meter.

On Scene Coordinator (OCS): The U.S. EPA onsite representative, Daniel D. Heister, or a representative authorized by him.

Project Coordinator: The project representative for MBK, Dulcy Berri, PBS Engineering and Environmental, or a PBS representative authorized by her.

Work Area: The area where asbestos-related work or removal operations are performed which is defined and/or isolated to prevent the spread of asbestos dust, fibers or debris, and entry by unauthorized personnel. Work area is a Regulated Area as defined by 29 CFR 1926 1101.

3. REGULATORY STANDARDS

Handling, moving and permanent onsite disposal of ACM debris will be conducted in accordance with Oregon Department of Environmental Quality (DEQ) and Oregon Occupational Safety and Health Administration (OR-OSHA) regulations, and other applicable federal, state and local government regulations.

4. NOTICES AND PERMITS

A notification of the asbestos abatement work has recently been submitted to the OSC and copied to the Oregon DEQ. That notification will be updated to encompass work conducted under this Work Plan, and submitted to the OSC and the DEQ.

Per 42 USC Section 9621 (e) regarding removal actions under CERCLA, no fee is required. The abatement contractor will update the notification form as necessary; changes will be submitted by the Project Coordinator's representative to the OSC and copied to the DEQ.

5. CONTRACTOR/WORKER LICENSES

The Project Coordinator will obtain the following from the asbestos abatement contractor:

-Written proof of the asbestos abatement contractor licensing;
-Written proof of state-certification of all asbestos abatement workers to be employed onsite;
-Written proof of a respirator program in compliance with OR-OSHA;
-Written proof of a medical exam program in compliance with OR-OSHA.

6. WORK PROCEDURES

Access. It is assumed that signed access agreements will be in-place on all affected properties. The Project Coordinator will ensure that Email notifications are submitted to affected property owners in accordance with the access agreement, and that other terms of the access agreement are met. For work that involves heavy equipment, efforts will be made to not restrict access and to perform work in a manner and at a time that does not disturb or interfere with residents' activities, e.g. plan work when residents are at work or otherwise away from the property.

Residents will be requested to securely contain valuables and pets inside homes or exterior areas (e.g. kennels, storage sheds). The contractor will not approach areas where pets are unrestrained. Residents also must remove all personal property from the pile areas planned for examination (Selim, Villa, Mingus, Cornachione, Rinehart; see below).

Work Hours/Days. In accordance with the access agreement, the work will be conducted Monday through Thursday between the hours of 7 AM and 6 PM.

Organization of the Work. The Project Coordinator and representatives will plan, direct and supervise the completion of work by the Contractor.

Conduct of the Work.

Evaluation of Known and Suspected Burial Piles. At this time, the following are the known and suspected "burial piles" (excerpted from the Preliminary Assessment report) (property owner name in parentheses):

Subdivision Tract 1267 of North Ridge Estates

- 15D-1400. Debris burial in former swimming pool on southeast side of Lot 4 (Rinehart)
- 15D-500. Debris burial pit on northeast side of Lot 6 (Cornachione)

Subdivision Tract 1306, Second Addition to North Ridge Estates

- 15B-400. Debris burial pit on north side of Lot 13 (Selim)
- 15C-200. Debris burn pit on Lot 16 (Lee)
- 15C-300. Debris burial pit on east side of Lot 17 (Villa)
- 15D-3000. Debris burial pit on southwest side of Lot 6 (MBK)
- 15D-3400. Debris burial pit on northeast side of Lot 2? (Graham)
- 15D-3500. Debris burial pit on north center of Lot 1 (Mingus)

The vicinity of the reported "debris burn pit" will be visually assessed to determine if there remains significant visible ACM debris or other indications of a significant "burial pit", in which case it will be dealt with along with other "piles" and "pits". The debris burial pit on the MBK parcel will also be inspected to determine if it constitutes a "pit", or perhaps was the location of surface debris accumulations.

The remaining "burial pits" include two large piles, known as the Swimming Pool pile (Rinehart property) and the Cornachione pile. Due to the suspected very large size of these two piles, the piles will be visually inspected to determine the most appropriate means for interim control of potential asbestos exposure and physical/safety hazards (see below). Three additional piles, smaller in size, will be referred to as the Selim, Villa and Mingus piles. These piles will be visually inspected to determine the best means and methods of access to the piles.

Access to conduct further work at all of the above piles will be arranged in concert with the OSC, the homeowner representative, the Project Coordinator's representative and the contractor.

The estimated locations of these five piles are illustrated in Figure 3 of the Preliminary Assessment report. Per the AOC, the above piles will be the focus of this Work Plan. The ongoing Surficial Removal action (Task 3A of the AOC) is providing further detailed information about the site, and it is acknowledged that other burial piles may exist. Such piles will be visually assessed and quantified, the locations measured using GPS equipment and added to the site base map. Recommendations regarding these piles will be provided in the report of work under this Work Plan. To the extent that such piles contain visible high concentrations of ACM debris, such debris may be explored and/or removed under this Work Plan, including all applicable procedures for access, notification, work conduct, etc. (see below).

Small Pile Exploration . A safe working distance will be established via flagging and/or safety cones around the pile to be examined, including the route of entry and exit from the property. The Project Coordinator's representative will be designated to maintain site control, to observe the movement and activity of the contractor, to detect potential entry by unauthorized personnel, and to ensure the protection of the private property.

The work will be conducted under the terms of the existing Hazardous and Contaminated Substance Health and Safety Plan. All personnel engaged in this work will be informed of precautionary measures to minimize dust or potential airborne asbestos fibers during the work. The pile material will be frequently wetted to control dust, whether visible or not. In the event of weather change, such as increase in wind, the work may be halted.

A total of three to four test pits will be completed across each pile to characterize the contents of the pile, using a small backhoe bucket. If high concentrations of ACM debris is encountered, the ACM will be loaded via backhoe into a lined dumpster. Contractor personnel will observe materials that are uncovered, and observe the walls of the test pit. In the event large pieces of friable ACM or insulated pipe sections are encountered, the contractor will carefully extract the material and wrap in plastic, then move to the dumpster by hand. If other hazardous materials are encountered, the Project Coordinator's representative will halt work and evaluate how to proceed.

At the completion of the exploratory work, removed ACM waste will be stored in the secured dumpster to be located on the west side of the warehouse, pending development and approval of a plan for permanent disposal. The Project Coordinator's representative will be responsible for regularly verifying the continuing integrity of the dumpster.

At the Selim site, the areas of the test pits will be backfilled as necessary to the original grade with clean fill obtained from offsite (outside of North Ridge Estates properties) and compacted with the backhoe bucket; if the surface sod has been disturbed, it will be restored to the Selim's reasonable satisfaction. At the other two pile locations, clean backfill will be used to level test pit areas with surrounding grade; no other site or surface restoration would appear to be necessary. In the event that homeowner structures need to be moved to access the piles, e.g. fencing, the contractor will restore or replace such structures to the homeowner's reasonable satisfaction.

Large Pile Exploration. Given concerns for stability of the Swimming Pool pile, exploration of several areas atop the pile will be conducted using a backhoe, using site controls as outlined above for Small Pile Exploration. Test pit locations will include the two known areas suspected to be voids. The Cornachione pile will similarly be investigated via test pits to evaluate the pile contents and volume. A total of six test pits are anticipated to be completed at these two larger piles.

The overall volumes of debris at the Swimming Pool pile and the Cornachione pile may be further defined using geophysical methods (see below).

Burial Pile Interim Control. Unless otherwise indicated by the findings of burial pile explorations, the perimeters of the Swimming Pool and Cornachione piles will be surrounded with fencing that is gated at one or more reasonable locations, and the gates secured with padlocks. No Trespassing signage will be placed on all sides of the fencing surrounding each pile. No interim controls are considered necessary at this time, for the smaller piles.

Burial Pile Long-Term Control. Based on the findings of pile explorations, recommendations will be made for long-term control of potential exposure to ACM debris remaining in the burial piles.

Geophysical Evaluation of Known and Suspected Buried Steam Lines. At this time, the following known and suspected locations of buried steam lines exist (excerpted from the Preliminary Assessment report):

- 15C-200. Lot 16, 2 steam pipes (24 inches below ground surface) on northeast side on lot, parallel to North Ridge Road.
- 15C-300. Lot 17, 2 steam pipes (24 inches below ground surface) on northeast side of lot, parallel to North Ridge Road.
- 15C-400. 2 steam pipes (24 inches below ground surface) on northeast side of Lot 18, parallel to North Ridge Road.
- 15C-500. 2 steam pipes (24 inches below ground surface) on northeast side of lot, parallel to North Ridge Road.
- 15A-1800. Former steam boiler plant located in center of Lot 10. Steam main lines (18-inch diameter) and other 10-inch and 8-inch diameter pipes possible on lot.
- 15A-1700. Possible steam pipes on northeast side of lot.
- 15C-100. Steam pipes cross center of Lot 8, northeast to southwest. 18-inch,10-inch and 8-inch diameter pipes.
- 15D-3000. Steam pipe (8-inch diameter) along northwest side and across center of lot.
- 15D-3100. Steam pipe (probably 8-inch diameter) across center of Lot 5.
- 15D-3200. Steam pipe (probably 8-inch diameter) across center of Lot 4.
- 15D-3300. Steam pipe (probably 8-inch diameter) across center of Lot 3.
- 15D-3400. Steam pipe (probably 8-inch diameter) across northeast side of lot.

The estimated locations of the buried steam lines are illustrated in Figure 3 of the Preliminary Assessment report. The geophysical surveyor (GeoPotential, Inc., Gresham, Oregon) will perform surface scans starting in these areas, to verify these locations and to determine the usefulness of various geophysical equipment at the site. It is anticipated that electromagnetic equipment, metallic tracer and ground-penetrating radar equipment may be used.

Known locations will be traced to the end of a reliable equipment response, or to an obstacle such as a house. In such an event, the survey will scan the perimeter of the house to determine if the steam line extends underneath the house.

Using known locations of the steam lines and the historic layout of the barracks buildings, survey lines will be completed perpendicular to the potential location of additional lines. In the event an equipment response is obtained, the feature will be further examined to the point of no further equipment response.

Findings (location and approximate depth of burial) will be incorporated into the existing Site Map via GPS locations, and the existing information database.

7. PERSONNEL PROTECTION

Procedures for personnel protective equipment and potential safety issues are described in the Hazardous and Contaminated Substance Health and Safety Work Plan, North Ridge Estates Time-Critical Removal Action and Field Investigation/Risk Assessment.

8. WASTE DISPOSAL

ACM debris and ACM-contaminated wastes generated by this work and by the previous Surficial Removal Action will be securely stored onsite in a locked, lidded dumpster. The Project Coordinator's representative and the contractor will perform regular inspections to ensure the integrity of the dumpster.

Alternatives for permanent disposal of ACM wastes will be evaluated: onsite disposal, offsite disposal at the local landfill, and offsite disposal at nearby landfills. Cost estimates will be developed for each alternative, based on the findings of the above exploratory work and the estimated volumes of ACM wastes requiring disposal. All alternatives will be developed in compliance with Oregon OAR 340-248.

9. REPORTING

In accordance with paragraph 30.A. of the AOC, within 30 days of completion of the Surficial Removal Action and the Burial Location Response Action (this Work Plan), a fully detailed final Removal Report will be submitted that describes the actions taken.